UNITED STATES PATENT AND TRADEMARK OFFICE

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HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER
DICKER, DENNIS T

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _05 September 2003_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-38_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-38_ is/are rejected.

7)☒ Claim(s) _19_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _05 September 2003_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _2/10/2005;9/5/2003_.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1.   . Claim 19 objected to because of the following informalities: "graphical

representation of printable images" unclear on what is a graphical representation of a

printable image. Appropriate correction is required.

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.   Claims 1, 3,4, 6, 11, 12 14-18 and 21 are rejected under 35 U.S.C. 102(b) as

being anticipated by Yoshida Kousuke (hereinafter "Kousuke" 09-001899).

As pertaining to Claim 1, Kousuke teaches a printer display (diode or display

116) comprising a control system (display and control section 114) to monitor progress

in processing a print job and a progress indicator (flashing or display of page being

printed) to display progress information to indicate the progress in processing the print

job [Drawings 6A and 6B; 0010].

As pertaining to Claim 3 and 21, Kousuke teaches a display and system wherein

the progress indicator comprises a progress bar configured to move from zero to one

hundred percent at a beginning and at an end of each page processed [0019 and

Drawing 3].

As pertaining to Claim 4, Kousuke teaches a display wherein the progress

indicator additionally comprises a progress bar configured to move from zero to one

hundred percent at the beginning an at n end of the print job [0033-0034].

As pertaining to Claim 6, Kousuke teaches a display wherein the control is

configured to monitor the progress by measuring processing time required for

completion of part of the print job and estimating remaining processing time for the print

job [0034 and 0018].

As pertaining to Claim 11, Kousuke teaches a display wherein the progress

information comprises information of a current page being processed and information

on progress of the print job [0019].

As pertaining to Claim 12, Kousuke teaches a printer comprising a print unit, a

display panel and a processor with associated memory operatively coupled to the print

unit and the display panel, wherein the processor is configure to direct the display panel

to display progress information indicative of progress of a print job from initiation to

completion [Figure 2 and Lines 0024-0030].

As pertaining to Claims 14, 15 and 16, Kousuke teaches a printer where the

control system is configured to monitor time passage from a time the printer initiates

processing: one or more images to a time when the printer completes processing the

one or more images [0016-0017], a strip and a time the printer completes processing

the strip [0015], a page and a time the printer completes processing the page [0018].

As pertaining to Claim 17, Kousuke teaches a printer comprising a progress indicator configured to display on the display panel a graphical representation showing processing progress of each page of a print job and processing progress of the print job in its entirety [Drawing 2 and 3].

As pertaining to Claim 18, Kousuke teaches a printer progress display system [Drawing 2] comprising a display system, a control system configured to track progress of a printable image [0017] and a progress indicator configured to display a graphical representation of the progress on the display panel [Drawing 3].

3.   Claim 24, 26, 28, 30, 32, 34, 35, 37 and 38 are rejected under 35 U.S.C. 102(e) as being anticipated by Nishikawa (6,486,968).

As pertaining to Claim 24, Nishikawa teaches a method where a printer progress display comprises monitoring of strips on a page and displaying a graphical [Column 7 Line 60-Column 8 Line 5] representation showing progress of the processing of the strips on the page [Figure 10-15].

As pertaining to Claim 26, Nishikawa teaches a method wherein the displaying comprises displaying a virtual movie showing a printer process a page of a print job from a time the printer initiates processing the page to a time when the printer completes processing the page [Figures 10-15].

As pertaining to Claims 28, 30, 32, 34, 35, 37 and 38,Nishikawa teaches a processor-readable medium comprising processor-executable instructions for: operating the progress indicator, obtaining data on a degree to which progress has been made,

providing on a progress indicator a graphical representation indicative of the progress

made on the print job, monitoring processing of strips on a page, displaying a graphical

representation showing progress of the processing of the strips on the page, displaying

a virtual movie showing a printer process a page of a print job from a time the printer

initiates processing the page to a time when the printer completes processing the page,

operating a printer display to display information indicative of progress in processing of

a print job and updating the display as the processing progress toward the completion of

the print job, including a page number currently being processed within the progress

information, displaying a virtual movie showing a printer processing a page of the print

job from a time the printer initiates processing the page to a time when the printer

completes processing the page [Figure 7and Column 3 Lines 44-67], displaying a

thumbnail image associated with a page of the print job and incrementally altering the

thumbnail image as the print job is processed[Figure 7, 10-16], and incrementing a

progress bar configured to move from zero to one hundred percent at a beginning and

end of each page processed [Figure 7 and 9].

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   Claim 2, 20, 8 10, 19 and 22 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Kousuke in view of Nishikawa (6,486,968).

With respect to claim 2 and 20, Kousuke teaches a printer display (diode or

display 116) comprising a control system (display and control section 114) to monitor

progress in processing a print job and a progress indicator (flashing or display of page

being printed) to display progress information to indicate the progress in processing the

print job [Drawings 6A and 6B; 0010].

Kousuke does not explicitly teach a display where the progress information that

the progress indicator displays includes a page number currently being processed.

Nishikawa teach a display where the progress information that the progress

indicator displays includes a page number currently being processed [Figure 10].

Therefore it would have been obvious to someone of ordinal skill in the art at the

time of invention to include the page number of the current page being processed on a

display, as this will give better notification on the progress of the print job.

With respect to claim 8 and 9, Kousuke teaches a printer display (diode or

display 116) comprising a control system (display and control section 114) to monitor

progress in processing a print job and a progress indicator (flashing or display of page

being printed) to display progress information to indicate the progress in processing the

print job [Drawings 6A and 6B; 0010].

Kousuke does not teach a display and system wherein the progress information

and indicator comprises a virtual movie and page showing a printer processing a page

of the print job from a time the printer initiates processing the page to a time when the printer completes processing the page.

Nishikawa teaches a display wherein the progress information and indicator comprises a virtual movie and page showing a printer processing a page of the print job from a time the printer initiates processing the page to a time when the printer completes processing the page [Figure 3 and Figure 8-16].

Therefore, it would have been obvious to someone of ordinary skill in the art at the time of invention to display an animation of a page being printed out, as this will give better notification on the progress of the print job.

With respect to claim 10, Kousuke teaches a printer display comprising a control system to monitor progress in processing a print job and a progress indicator to display progress information to indicate the progress in processing the print job [0010].

Kousuke does not teach a display wherein the progress indicator comprises a virtual page associated with a page of the print job wherein the virtual page is illuminated strip by strip, as each strips within an actual page within the print job are processed.

Nishikawa teaches a display wherein the progress indicator comprises a virtual page associated with a page of the print job [Figure 10] wherein the virtual page is illuminated strip by strip, as each strips within an actual page within the print job are processed [Column 7 Line 60-Column 8 Line 5].

Therefore it would have been obvious to someone of ordinary skill in the art at the time of invention to divide a page into a plurality of strips and associate those strips

with the animated page, as they will give the user a more precise indication of the time remaining in the current page printout.

With respect to claim 19, Kousuke teaches a printer progress display system [Drawing 2] comprising a display system, a control system configured to track progress of printable image [0017] and a progress indicator configured to display a graphical representation of the progress on the display panel [Drawing 3].

Kousuke does not teach a system wherein the progress indicator is configured to provide a strip-by-strip representation of printable images as the printable images are processed.

Nishikawa teaches a system wherein the progress indicator is configured to provide a strip by strip graphical representation [Figure 10], as each strips within an actual page within the print job are processed [Column 7 Line 60-Column 8 Line 5].

Therefore it would have been obvious to someone of ordinary skill in the art at the time of invention to divide a page into a plurality of strips and associate those strips with the animated page as they will give the user a better understanding of the time remaining in the current page printout.

With respect to claim 22, Kousuke teaches a printer progress display system [Drawing 2] comprising a display system, a control system configured to track progress of printable image [0017] and a progress indicator configured to display a graphical representation of the progress on the display panel [Drawing 3].

Kousuke does not teach a system wherein the graphical representation comprises a virtual movie configured to show a printer processing a page of a printer

job from a time the printer initiates processing the page to a time the printer completes

processing the page.

Nishikawa teaches a display wherein the progress information and indicator

comprises a virtual movie and page showing a printer processing a page of the print job

from a time the printer initiates processing the page to a time when the printer

completes processing the page [Figure 3 and Figure 8-16].

Therefore, it would have been obvious to someone of ordinary skill in the art at

the time of invention to display an animation of a page being printed out to give the user

a better visual understanding of how long it will take the page to be printed.

6.   Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kousuke

in view of Ayata et al. (hereinafter "Ayata" 4,718,040).

With respect to claim 5, Kousuke teaches a printer display (diode or display 116)

comprising a control system (display and control section 114) to monitor progress in

processing a print job and a progress indicator (flashing or display of page being

printed) to display progress information to indicate the progress in processing the print

job [Drawings 6A and 6B; 0010].

Kousuke does not teach a display wherein the control system is configure to

monitor the progress by monitoring memory initially required for the print job ad memory

currently required for the print job.

Ayata teaches a display wherein the control system is configure to monitor the

progress by monitoring memory initially required for the print job ad memory currently

required for the print job [Column 3 Lines 52-63].

Therefore it would have been obvious to someone of ordinary skill in the art at

the time of invention to include the feature of memory monitoring while printing to inform

the user when memory is low and when more memory is needed to print the current

print job.

7.   Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kousuke

in view of Nishikawa and further in view of Ayata.

With respect to Claim 13 Kousuke teaches a printer comprising a print unit, a

display panel and a processor with associated memory operatively coupled to he print

unit and the display panel, wherein the processor is configure to direct the display panel

to display progress information indicative of progress of a print job from initiation to

completion [Figure 2 and Lines 0024-0030]. Kousuke also teaches a printer processor,

which estimates processing, times to predict remaining time for the print job [0039-

0040].

Kousuke does not teach a printer wherein the processor is configure to generate

the progress information using a technique comprising determining number of strips and

estimating processing times and monitoring memory.

Ayata teaches a printer wherein the processor is configured to generates

progress information by determining a number of strips processed in view of a number

of strips to be processed [Column 3 Lines 52-63].

Nishikawa teaches a printer wherein the processor is configured to generates

progress information by monitoring memory to determine the progress information

[Nishikawa-Column 7 Line 60-Column 8 Line 5].

Therefore it would have been obvious to someone of ordinary skill in the art at

the time of invention to include the feature of memory monitoring while printing to inform

the user when memory is low and when more memory is needed to print the current

print job and to divide a page into a plurality of strips and associate those strips with the

animated page as they will give the user a better understanding of the time remaining in

the current page printout.

8.   Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kousuke

in view of Roztocil et al. (hereinafter "Roztocil" 2001/0044868).

With respect to Claim 23, Kousuke teaches a printer progress display system

[Drawing 2] comprising a display system, a control system configured to track progress

of printable image [0017] and a progress indicator configured to display a graphical

representation of the progress on the display panel [Drawing 3].

Kousuke does not teach a system wherein the progress indicator comprises a

thumbnail image located within the display panel.

Roztocil teaches a graphical user interface for use on a display of an output device where the page display window displays a visual representation thumbnail of the document that is being produced [0051 and Figure 3].

Therefore it would have been obvious to someone of ordinary skill in the art at the time of invention to include a thumbnail representation of the actual page being printed so that the user can visually see a print preview on the printer display where it would be more efficient.

9.   Claim 29 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa in view of Roztocil.

With respect to claim 29, Nishikawa teaches a processor-readable medium comprising processor-executable instructions for: operating the progress indicator, obtaining data on a degree to which progress has been made and providing on a progress indicator a graphical representation indicative of the progress made on the print job [Figure 7 and Column 3 Lines 44-67].

Nishikawa does not explicitly teach a processor readable medium which comprises further instructions for generating a thumbnail image within a portion of the display panel to provide an indication of what a page of the print job is going to look like.

Roztocil teaches the generation of a thumbnail image within a portion of the display panel to provide an indication of what a page of the print job is going to look like [0051 and Figure 3].

Therefore it would have been obvious to someone of ordinary skill in the art at the time of invention to include these further instructions on the processor readable medium to help the system generate a thumbnail image within the display.

With respect to Claim 33, Nishikawa teaches a processor-readable medium comprising processor-executable instructions for: monitoring processing of strips on a page and displaying a graphical representation showing progress of the processing of the strips on the page [Figure 7 and Column 3 Lines 44-67].

Nishikawa does not explicitly teach a processor readable medium comprising further comprising instructions for displaying a thumbnail image of the page and incrementally updating the thumbnail image as the page is processed.

Roztocil teaches the displaying of a thumbnail image of a page and incrementally updating the thumbnail image as the page is processed [0067].

Therefore it would have been obvious to someone of ordinary skill in the art at the time of invention to include these further instructions on the processor readable medium where these instructions will help the system work to its full capabilities.

10.   Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa in view of Kousuke.

With respect to Claim 25, Nishikawa teaches a method where a printer progress display comprises monitoring of strips on a page and displaying a graphical [Column 7 Line 60-Column 8 Line 5] representation showing progress of the processing of the strips on the page [Figures 10-15].

Nishikawa does not explicitly teach a method wherein the displaying comprises

displaying a progress bar that moves as each page is processed from an initial value at

a page beginning to a final value at a page ending.

Kousuke teaches a method wherein the displaying comprises displaying a

progress bar that moves as each page is processed from an initial value at a page

beginning to a final value at a page ending [0019 and Drawing 3].

Therefore it would have been obvious to someone of ordinary skill in the art at

the time of invention to include the feature of a progress bar to inform the user on the

remaining time in he print job.

11.   Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Nishikawa in view of Roztocil.

With respect to Claim 27, Nishikawa teaches a method where a printer progress

display comprises monitoring of strips on a page and displaying a graphical [Column 7

Line 60-Column 8 Line 5] representation showing progress of the processing of the

strips on the page [Figure 10-15].

Nishikawa does not teach a method wherein the displaying comprises displaying

a thumbnail of the page

Roztocil teaches a display comprising displaying a thumbnail image of the page

[0051 and Figure 3].

Therefore it would have been obvious to someone of ordinary skill in the art at

the time of invention to include a thumbnail representation of the actual page being

printed so that the user can visually see a print preview on the printer display where it would be more efficient.

12.   With respect to claim 7, Kousuke teaches a printer display comprising a control system to monitor progress in processing a print job and a progress indicator to display progress information to indicate the progress in processing the print job [0010]. Kousuke also teaches a display wherein the progress indicator is configured to indicate estimated remaining processing time [0018].

Kousuke does not explicitly teach a time in mm:ss notation.

Although this notation is not explicitly taught by Kousuke it would have been obvious by someone of ordinary skill in the art at the time of invention to use this notation to estimate remaining time of a print job where mm:ss is known as an international standard format.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Dicker whose telephone number is (571) 270-3140. The examiner can normally be reached on Monday - Friday 7:30 A.M. to 4:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Eisen can be reached on (571) 272-7687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Alexander Eisen
SPE
Art Unit 2609

DD
7/5/2007